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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,260	09/30/2003	Mark Adam Bachman	Bachman 2-9-165-45-32/246	4045
29391	7590	12/21/2004	EXAMINER NGUYEN, THINH T	
BEUSSE BROWNLEE WOLTER MORA & MAIRE, P. A. 390 NORTH ORANGE AVENUE SUITE 2500 ORLANDO, FL 32801			ART UNIT 2818	
PAPER NUMBER				

DATE MAILED: 12/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/675,260

Applicant(s)

BACHMAN ET AL.

Examiner

Thinh T Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED OFFICE ACTION

Election/Restriction

1. Applicant's election **with traverse** of claims **1-6** in Paper No. **6** is acknowledged.

Because Applicant did not distinctly and specifically point out the supposed error in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Applicants have the right to file a divisional, continuation or continuation-in-part application covering the subject matter of the non-elected claims.

The traversal is on the ground(s) that see the election paper. This is not found persuasive because applicant does not give any reason for the traversal. Moreover, it must be reiterate to the applicant that method and device claims are NOT coextensive and the determinations of patentability of method and device claims are different, that is process limitations and device limitations are given weight differently in determining the patentability of the claimed inventions. Also, the strategies for doing text searching of the device claims and method claims are different. Thus, separate searches are required.

The requirement is still deemed proper and is therefore made **FINAL**.

Specification

2. The specification has been checked to the extent necessary to determine the presence

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of all possible minor errors. However, the applicant cooperation is requested in correcting any errors of which the applicant may become aware in the specification.

Claim Objections

3 Claim 3 is objected for the recitation --“ wherein the reinforcing layer is a patterned structure”-- . This recitation makes the claim indefinite since it is possible for the examiner to know which one of the tens of thousands of patterned structures the applicant wants to claim.

Correction or clarification is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(b/e) that form the basis for the rejections under this section made in this office action.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claim 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Costrini et al. (U.S. Patent 6,187,680) or under 35 U.S.C. 102(e) as being anticipated by Pozder et al. (US patent 6,803,302).

REGARDING CLAIM 1

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Costrini et al. (the abstract, fig 4© , fig 4(a)) disclose an integrated circuit comprising: a contact pad (fig 4(a) layer 30, column 5 lines 17-30) formed of a metal; a reinforcing layer(layer 28) underlying said contact pad, said reinforcing layer (column 4 lines 64-67, column 5 line 1-7) being formed of a metal different than the metal of the contact pad; at least one metal layer (layer 22) under said reinforcing layer; and at least one dielectric layer(layer 24) disposed under said reinforcing layer.

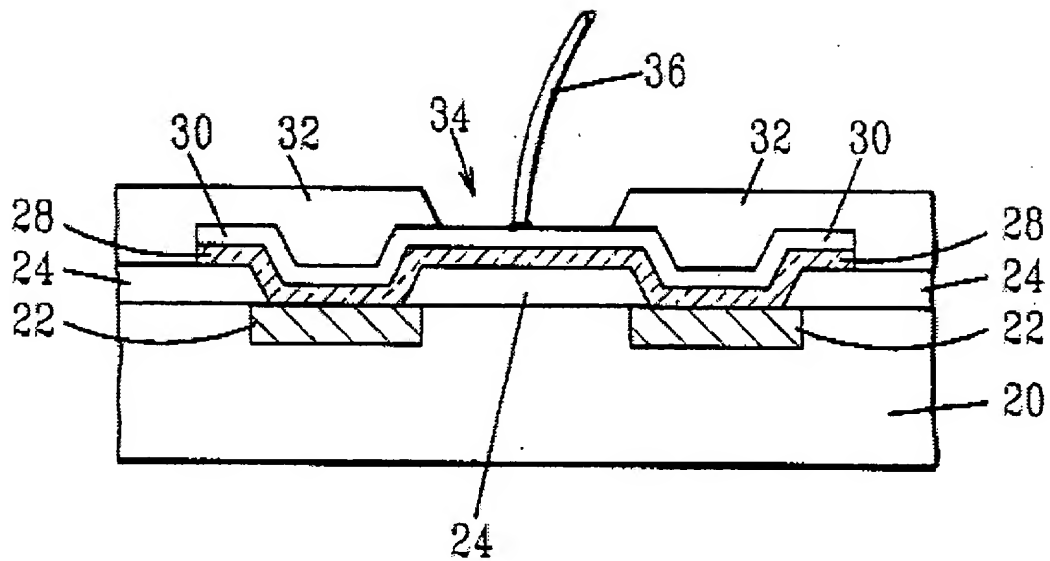


FIG. 4(c)

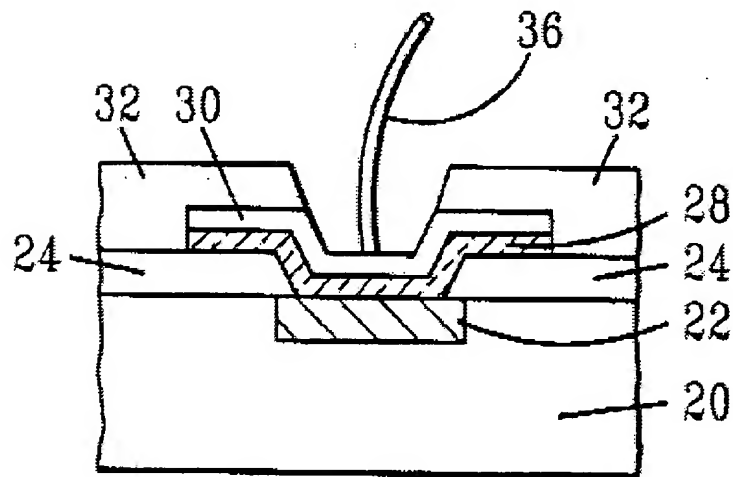


FIG. 4(a)

Similarly, Pozder et al. (the abstract, fig 2 layer 204,layer 202,layer 134, layer 136)

disclose the same invention

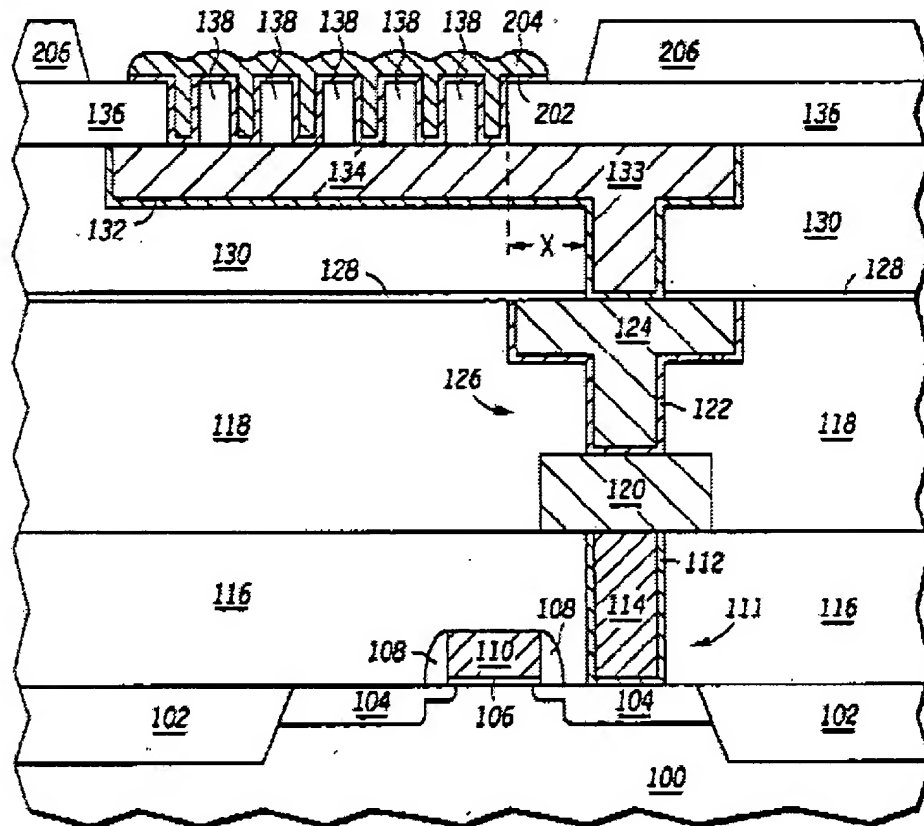


FIG. 2

REGARDING CLAIM 2

Costrini et al. (the abstract, fig 4© , fig 4(a),column 5 line 5) disclose an integrated circuit comprising a reinforcing layer that comprises tungsten or tantalum. Those metals are refractory.

Similarly, Pozder et al. (the abstract, fig 2 layer 204,layer 202,layer 134, layer 136,column 5 lines 24-26) disclose the same invention

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REGARDING CLAIM 3

To expedite prosecution, The Examiner assume that the applicant claim some sort of pattern. If that is the case, then claim 3 is anticipated by both Costrini et al (in fig 4©) and Pozder et al. (fig. 2)

REGARDING CLAIM 4

Costrini et al. (the abstract, fig 4© , fig 4(a),column 5 lines 23-30) disclose an integrated circuit with contact pad wherein the metal the metal of the contact pad is selected from the group comprising aluminum, copper and alloys of aluminum and copper.

Similarly, Pozder et al. (the abstract, fig 2 layer 204,layer 202,layer 134, layer 136,column 5 lines 29-30) disclose the same invention.

REGARDING CLAIM 5

Costrini et al. (the abstract, fig 4© , fig 4(a),layer 28, column 5 lines 1-7) disclose an integrated circuit with contact pad wherein the metal of the reinforcing layer is selected from the group comprising titanium, titanium nitride, tungsten, tungsten nitride, nickel, and alloys or combinations thereof.

Similarly, Pozder et al. (the abstract, fig 2, layer 202 ,column 5 lines 23-25) disclose the same invention.

Claim Rejections - 35 USC § 103

6. The following is a quotation of U.S.C. 103(a) which form the basis for all obviousness rejections set forth in this office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made.

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Costrini et al (U.S. patent 6,187,680) in view of further remark

Costrini disclose all the invention except for a different range of thickness for the reinforcing layer 28 : from 100 to 1500 Angstrom or from 10 to 150 nanometer. However, these range still overlaps with applicant claimed range of about 100 to 600 nanometer.

Moreover It would have been obvious to one of ordinary skill in the art the time the invention was made to use the teachings by Costrini et al. and his own ordinary design skill in order to come up with the invention of claim 6 since it has been held that when all the general conditions of a claim is disclosed in prior art; discovering the optimum ranges required only routine skill in the art.

A person skilled in the art at the time the invention was made would have been able to use the information provided by Costrini et al. and come up with the invention of claim 6 for a purpose of improving the device invented by Costrini et al.

8. When responding to the office action, Applicants are advised to provide the examiner with the line numbers and the page numbers in the application and/or references cited to assist the examiner to locate the appropriate paragraphs.

9. A shortened statutory period for response to this action is set to expire 3 (three)

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months and 0 (zero) day from the day of this letter. Failure to respond within the period for response will cause the application to be abandoned (see M.P.E.P. 710.02(b)).

CONCLUSION

10. The prior arts made of record and not relied upon are considered pertinent to applicant disclosure: Heim (US patent 5,284,797) disclose a semiconductor bond pads

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thinh T Nguyen whose telephone number is 571-272-1790.

The examiner can normally be reached on Monday-Friday 9:00am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached at 571-272-1787.

The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Thinh T. Nguyen



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MICHAEL TRAN
PRIMARY EXAMINER